

## **APPENDIX 10 - Equivalent Programs for Runoff Controls for New Development, Redevelopment, and Construction Sites**

*Proceed to Part 3 for information associated with programs equivalent to Ecology's 2019 Stormwater Management Manual for Western Washington.*

### **Part 1**

Ecology determined that the following enforceable documents, including codes, ordinances, director's rules, public rules and/or manuals, are functionally equivalent to Appendix I in the Phase I Municipal Stormwater Permit (effective August 1, 2013) and the required portions of Ecology's *2012 Stormwater Management Manual for Western Washington as amended in December 2014*. If Ecology's determination of equivalency is conditioned, the conditions are listed below. Permittees must comply with listed conditions, if applicable, in order to achieve equivalency and comply with associated permit requirements. Links to the documents listed in this appendix can be found on Ecology's website.

#### **A. King County**

King County is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. King County Code Chapter 9.04 and Chapter 9.12 as amended by Ordinance 18257, adopted on March 15, 2016.
2. King County Code Chapter 16.82
3. 2016 Surface Water Design Manual, including appendices and references, adopted by Public Rule PUT 8-3-5 on March 25, 2016 and effective April 24, 2016.
4. 2016 Stormwater Pollution Prevention Manual, adopted by Public Rule PUT 8-8-3 on March 25, 2016 and effective April 24, 2016.

## B. City of Seattle

City of Seattle is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. Seattle Municipal Code Chapters 22.800 – 22.808 titled, "Stormwater Code" as adopted in September 2015 (Ordinance 124872).
2. Joint Seattle Public Utilities (SPU)/Department of Planning and Development (DPD) Directors' Rule titled, "Stormwater Manual" (Directors Rule SPU DWW-200/DPD 21-2015) effective January 1, 2016. (Note that Seattle Department of Construction and Inspections (SDCI), a successor department to DPD, has assumed DPD's role with respect to Seattle's Stormwater Code and Stormwater Manual, effective January 1, 2016.)

## C. City of Tacoma

City of Tacoma is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. Tacoma Municipal Code Chapter 12.08 Wastewater and Surface Water Management as effective on November 24, 2015.
2. The "City of Tacoma Stormwater Management Manual 2016 Edition," as submitted to Ecology on December 7, 2015 in accordance with Tacoma's communication "City of Tacoma SWMM and Ordinance."

## D. Pierce County

Pierce County is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. Pierce County Code Title 17A, as effective on December 5, 2015.
2. Pierce County Code Title 17B, as effective on December 5, 2015.
3. Pierce County *Stormwater Management Manual* and *Site Development Manual*, as effective December 5, 2015.
4. Pierce County Memorandum "Policy to Buy Into Regional Stormwater Ponds," as effective October 27, 2015.

### E. Clark County

Clark County is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. Clark County Municipal Code Chapter 13.26A, as effective on January 8, 2016.
2. Clark County Municipal Code Chapter 40.386, as effective on January 8, 2016.
3. *Clark County Stormwater Manual*, Books 1 through 4, as effective January 8, 2016.
  - a. This manual references a Clark County-specific calibration of an HSPF-based continuous runoff model. That calibration was verbally approved by Ecology on November 2, 2015, and accepted by Clark County in a December 29, 2015 letter. The approved calibration was incorporated as part of WWHM 2012, version 4.2.12, released February 25, 2016.

### F. WSDOT Highway Runoff Manual

The Department of Ecology completed its review of the *2014 Washington State Department of Transportation Highway Runoff Manual* (2014 HRM), and found that it meets design requirements and best management practices for public road projects, equivalent to Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* and *2004 Stormwater Management Manual for Eastern Washington*.

### G. Snohomish County

Snohomish County is meeting permit requirements S5.C.5.a.i. and S5.C.5.a.ii, and achieves equivalency with Ecology's *2012 Stormwater Management Manual for Western Washington as Amended in December 2014* by adopting and implementing the regulations and rules listed below.

1. Snohomish County Code Chapter 30.63A, as amended by Ordinance No. 15-102, adopted on January 11, 2016.
2. Snohomish County Code Chapter 30.63B, as amended by Ordinance No. 15-103, adopted on January 11, 2016.
3. *Snohomish County Drainage Manual*, January 2016, Volumes I through V.
4. *Snohomish County Engineering Design and Development Standards*, as adopted January 22, 2016, Chapters 1, 5, and 11.

## Part 2

The 2012 Stormwater Management Manual for Western Washington as Amended in December 2014 (2014 SWMMWW) has been updated and superseded by the 2019 Stormwater Management Manual for Western Washington (2019 SWMMWW).

Enforceable documents (including codes, ordinances, director's rules, public rules and/or manuals) must be updated and/or amended to incorporate the following **significant changes** made to applicable portions of the Western Washington Phase I Municipal Stormwater Permit (effective August 1, 2019) and the 2019 SWMMWW.

1. **Continuous Simulation Modeling:** Text throughout the SWMMWW has been updated to require continuous simulation models that include:
  - The ability to directly model BMPs that may be used in LID applications, such as bioretention, permeable pavement, and green roofs.
  - 15-minute time steps.
  - Incorporation of the van Genuchten algorithm to model bioretention.
2. **Replaced Hard Surfaces Redevelopment Threshold:** The Minimum Requirement Thresholds for non-road related commercial or industrial redevelopment projects have been updated to require the project proponent to compare the value of the proposed improvements to the value of the Project Site (the limits of disturbance) improvements, rather than the Site (the entire parcel) improvements.
3. **Equivalent Areas:** The Redevelopment Project Thresholds have been updated to allow a project proponent to provide Stormwater Management BMPs for an equivalent area. The equivalent area may be on-site or off-site if the area drains to the same receiving water and the guidance for in-basin transfers is followed.
4. **Minimum Requirement 2:** The 13 Elements in Minimum Requirement 2 (Construction Stormwater Pollution Prevention) have been updated to incorporate changes that were made to the *2015-2020 Construction Stormwater General Permit*.
5. **Minimum Requirement 5:** Minimum Requirement 5 (On-Site Stormwater Management) has been updated to require BMP T5.13 (Soil Quality and Depth) when choosing to use the LID Performance Standard to meet Minimum Requirement 5, for Minimum Requirement 1-5 projects.
6. **Minimum Requirement 7:** Minimum Requirement 7 (Flow Control) has been updated to ensure that a TDA discharging to a marine waterbody meets all exemption requirements before it can be determined to be Flow Control exempt.

7. **Concrete Washout BMP:** BMP C154 (Concrete Washout Area) has been updated to clarify that auxiliary concrete truck components and small concrete handling equipment may be washed into formed areas awaiting concrete pour, while concrete truck drums must be washed either off-site or into a concrete washout area.
8. **Source Control BMPs:** Volume IV (Source Control BMP Library) has been updated with Source Control BMPs for activities not listed in previous versions of the manual. The new activities with Source Control BMPs are:
  - S434 BMPs for Dock Washing
  - S441 BMPs for Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing
  - S435 BMPs for Pesticides and an Integrated Pest Management Program
  - S444 BMPs for the Storage of Dry Pesticides and Fertilizers
  - S449 BMPs for Nurseries and Greenhouses
  - S450 BMPs for Irrigation
  - S445 BMPs for Temporary Fruit Storage
  - S439 BMPs for In-Water and Over-Water Fueling
  - S436 BMPs for Color Events
  - S438 BMPs for Construction Demolition
  - S440 BMPs for Pet Waste
  - S442 BMPs for Labeling Storm Drain Inlets On Your Property
  - S443 BMPs for Fertilizer Application
  - S446 BMPs for Well, Utility, Directional and Geotechnical Drilling
  - S447 BMPs for Roof Vents
  - S451 BMPs for Building, Repair, Remodeling, Painting, and Construction
  - S452 BMPs for Goose Waste
9. **Wetlands Guidance:** Appendix I-C (Wetland Protection Guidelines) and Minimum Requirement 8 (Wetlands Protection) have been updated to require monitoring and modeling of high value wetlands, if the project proponent has legal access to them. The 2014 Wetland Guidance is retained, but refined, for modeling requirements for lower value wetlands (and high value wetlands that the project proponent does not have legal access to).

### Submittal Format

The submittal described in S.5.C.5.b.iii(a) shall follow the format of Table 10.1. Ecology has provided example text to illustrate how to properly fill in the table

**Table 10.1: Enforceable Document Updates to Match Ecology's Significant Changes**

Significant Change Being Addressed	Enforceable Document Being Updated	Section Within the Enforceable Document Being Updated	Text as Written in the 2014 Functionally Equivalent Enforceable Document	Proposed Text to Gain 2019 Functional Equivalency
1. Continuous Simulation Modeling	County A's Stormwater Design Manual	2014 Section 5.2, revised as 2019 Section 5.6	"The designer shall use the water quality flow rate determined by WWHM3, using a 1-hour time step."	"The designer shall use the water quality flow rate determined by an Ecology approved continuous simulation model, using a 15-minute time step."
2. Replaced Hard Surfaces Redevelopment Threshold	County A's Code	Code XXXX part a.	"Other types of redevelopment projects shall comply with Minimum Requirements #1 through #9 for the new and replaced hard surfaces and the converted vegetated areas if the total of new plus replaced hard surfaces is 5,000 square feet or more, and the valuation of proposed improvements – including interior improvements – exceeds 50% of the assessed value of the existing site improvements."	Other types of redevelopment projects shall comply with all the Minimum Requirements for the new and replaced hard surfaces and the converted vegetation areas if:  The total of new plus replaced hard surfaces is 5,000 square feet or more, and  For commercial or industrial projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Project Site improvements.  For all other projects: the valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing Site improvements.
8. Source Control BMPs	County A's Stormwater Design Manual	Chapter 6	(no existing text about the new BMPs)	(New Source Control BMPs from Ecology's 2019 SWMMWW added verbatim to County A's Stormwater Design Manual)

If the Permittee proposes a significant update to their program that is not captured in the required changes identified by Ecology (above) (e.g. a new proposed, or revised, BMP), then the Permittee shall submit those changes using the format described in Table 10.2 (below). A rationale must be included to demonstrate that the proposal meets AKART and MEP. The amount of detail required will depend on the type of update being proposed, but all proposed updates must include rationale. Incomplete submittals will not be reviewed.

**Table 10.2: Enforceable Document Updates Beyond Ecology's List of Significant Changes**

Brief Description of the Change	Rationale for the Change (attach supporting documents if necessary)	Enforceable Document Being Updated	Section Within the Enforceable Document Being Updated	Text as Written in the 2014 Functionally Equivalent Enforceable Document	Proposed Text for Ecology Review and Approval

### Part 3

Ecology determined that the enforceable documents, including codes, ordinances, director's rules, public rules and/or manuals that are listed in Appendix 10 Part 1 combined with the changes that were submitted, and approved in accordance to S5.C.5.b, are functionally equivalent to Appendix I in the *Phase I Municipal Stormwater Permit* (effective August 1, 2019) and the required portions of Ecology's *2019 Stormwater Management Manual for Western Washington*<sup>1</sup>. These Programs must be adopted and made effective no later than July 1, 2021. If Ecology's determination of equivalency has special considerations<sup>2</sup>, those considerations are listed below. Permittees must comply with listed considerations, if applicable, in order to achieve equivalency and comply with associated permit requirements. Links to the documents listed in this appendix can be found on Ecology's website.

<sup>1</sup> The documents listed in this section are assumed to be a combination of the programs listed in Appendix 10 part 1, combined with the changes that were submitted in accordance to S5.C.5.b. Ecology only reviewed the changes that were submitted to us for determining equivalency with the Municipal Stormwater Permit purposes. Any changes to the program listed in Appendix 10 part 1 that were not submitted to Ecology were not reviewed, and therefore may not be equivalent.

<sup>2</sup> These considerations provide additional detail on each of the Phase I local programs and the limitations of applicability for other jurisdictions. Jurisdictions should review these considerations, along with other factors such as their ability to differentiate between what is regionally appropriate, when deciding which program is appropriate to adopt.

## A. King County

King County is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

1. King County Code Chapter 9.04 and Chapter 9.12 as amended by Ordinance 18257, adopted on March 15, 2016.
2. King County Code Chapter 16.82
3. 2021 Surface Water Design Manual, including appendices and references, effective July 23, 2021.

### Special considerations for other jurisdictions

Other jurisdictions considering adopting King County's *Core Requirement #9: Flow Control BMPs* in King County's *2021 Surface Water Design Manual* will need to ensure they also adopt the bioretention sizing requirements in King County's *Surface Water Design Manual*. This option may only be appropriate in King County.

## B. City of Seattle

City of Seattle is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

1. Seattle Municipal Code Chapters 22.800 – 22.808 titled, "Stormwater Code" as adopted in May 2021 (Ordinance 126336).
2. Joint Seattle Public Utilities (SPU)/Seattle Department of Construction and Inspections (SDCI) Directors' Rule titled, "Stormwater Manual" (Directors Rule SPU DWW-200/SDCI 10-2021) effective July 1, 2021.

### Special considerations for other jurisdictions

Other jurisdictions considering adopting the City of Seattle's Stormwater Manual Section 5.2 On-site Stormwater Management will need to ensure they also adopt the bioretention sizing requirements associated with the requirements in Section 5.2. This option may only be appropriate in the City of Seattle.

Additionally, many of the requirements in the City of Seattle's Stormwater Program apply specifically to highly urbanized areas that have had at least 40% total impervious areas since 1985 (see I-3.4.7 MR7: Flow Control, in the SWMMWW). It may be inappropriate for other jurisdictions to adopt the City of Seattle's program requirements designed to address these areas.



### C. City of Tacoma

City of Tacoma is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

1. Tacoma Municipal Code Chapter 12.08 Wastewater and Surface Water Management as effective on July 1, 2021.
2. The 2021 Stormwater management Manual, as effective on July 1, 2021.

#### Special considerations for other jurisdictions

These regulations and rules are only deemed functionally equivalent within the City of Tacoma city limits.

### D. Pierce County

Pierce County is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

1. Pierce County Code Title 17A, as effective on July 1, 2021.
2. Pierce County Code Title 17B, as effective on July 1, 2021.
3. Pierce County *Stormwater Management Manual* and *Site Development Manual*, as effective July 1, 2021.
4. Pierce County Memorandum "Policy to Buy Into Regional Stormwater Ponds," as effective October 27, 2015.

#### Special considerations for other jurisdictions

Pierce County completed an infiltration capacity analysis to justify placing Downspout Dispersion at the same list level as bioretention for sites that are underlain by Spanaway soils. The requirements, characteristics and descriptions of Spanaway Soils are defined and discussed in several locations in the approved Pierce County Stormwater Management and Site Development Manual (Pierce County's Manual). Other jurisdictions adopting Pierce County's Manual will need to continue using the same information should they choose to adopt the Pierce County Manual.

Downspout Dispersion being placed at the same level as bioretention is not approved for any other soil.

## E. Clark County

Clark County is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

Clark County Stormwater Manual references a Clark County-specific calibration of the 2012 Western Washington Hydrogeology Model (WWHM2012). Version 4.2.12 of WWHM2012 introduced this calibration in the Clark2012SG mapping unit.

1. The Clark County Stormwater Manual 2021 and amendments to Clark County Code Chapters 13.26A Water Quality and 40.386 Stormwater and Erosion Control as adopted June 1, 2021 (Ordinance 2021-06-02), effective July 1, 2021.

### Special considerations for other jurisdictions

The Clark2012SG is not approved by Ecology for use outside of Clark County. Other jurisdictions outside of Clark County must continue using the standard WWHM2012 or another approved continuous runoff model, even if they choose to adopt this manual.

Other jurisdictions within Clark County may use the Clark2012SG in conjunction with other approved stormwater manuals, and are not constrained to using solely Clark County's Stormwater Manual simply because they choose to use the Clark2012SG.

## F. Snohomish County

Snohomish County is meeting permit requirements S5.C.5.b.i. and S5.C.5.b.ii, and achieves equivalency with Ecology's *2019 Stormwater Management Manual for Western Washington* by adopting and implementing the regulations and rules listed below.

1. Snohomish County Code Chapter 30.63A, as amended by Amended Ordinance No. 21-025, adopted on June 16, 2021.
2. Snohomish County Code Chapter 30.63B, as amended by Amended Ordinance No. 21-025, adopted on June 16, 2021.
3. *The 2021 Snohomish County Drainage Manual*, as adopted on June 28, 2021.
4. *Snohomish County Engineering Design and Development Standards*, as adopted January 22, 2016, Chapters 1, 5, and 11.

## G. WSDOT Highway Runoff Manual

The Department of Ecology completed its review of the *2019 Washington State Department of Transportation Highway Runoff Manual* (2019 HRM), and found that it meets design requirements and best management practices for public road projects, equivalent to Ecology's *2019 Stormwater Management Manual for Western Washington* and *2019 Stormwater Management Manual for Eastern Washington*.

Ecology has determined the HRM to be equivalent to both of Ecology's Western and Eastern Stormwater Management Manuals for minimum design requirements and best management practices for public road projects. Permittees may adopt and employ these design requirements and best management practices (only) for use for public road projects within their jurisdictions. It should be noted that there are some different thresholds, additional provisions (or exemptions) in the HRM that apply only to Washington State Department of Transportation and are not appropriate for local governments to follow and implement.